

ABSTRACT OF THE DISCLOSURE

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The modular ultrasonic clutch brake mechanism comprises an AC power control unit, a driving member, a driven member, two supporting frame units, a pre-loaded force adjustment means, two connectors, and a pedestal. Both the driving and the driven
25 members are made of a piezoelectric substance. Then, contact surfaces of the two members are forcibly coupled and trammed

using a clutching force existing between the contact surfaces when both the two members are not energized. This clutch effect is released by energizing the piezoelectric substance with AC power for inducing an ultrasonic vibration on the piezoelectric device.

5 Thus, contact surfaces of the two members are separated using the ultrasonic vibration of each member energized when at least one of the two members is energized. Moreover, a friction brake means may be fixed on the contact surface of each of the two members to ensure the reliability of the mentioned mechanism.

10 (Figs. 2)